DOCUMENT RESUME

ED 115 578 SO 008 823

AUTHOR Carlson, Richard O.; And Others

TITLE The Diffusion of Educational Innovation: Recommendations for Policy Makers and Administrators.

INSTITUTION Social Science Education Consortium, Inc., Boulder, Colo.

SPONS AGENCY Johnson Foundation, Inc., Racine, Wis.; National Science Foundation, Washington, D.C.
REPORT NO SSEC-Pub-181
PUB DATE 75
NOTE 38p.; For a related document, see SO 008 816
AVAILABLE FROM Publications, Social Science Education Consortium, Inc., 855 Broadway, Boulder, Colorado 80302 (SSEC no. 181, $1.50 prepaid or purchase order)

EDRS PRICE MF-$0.76 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Administrator Guides; Change Agents; *Change Strategies; *Chief Administrators; *Diffusion; Educational Change; *Educational Innovation; Elementary Secondary Education; Generalization; Innovation; Methods; Social Sciences; Symposia

ABSTRACT

This document is one of two publications that resulted from the National Seminar on the Diffusion of New Instructional Materials and Practices held at the Wingspread Conference Center in Racine, Wisconsin in June 1973. It is written for and recommends diffusion methods to those who control the resources that are used to diffuse and implement educational innovation--school building and district administrators and policy makers, persons in state department of education, and officials in federal agencies supporting education. The paper consists of a set of 24 generalizations about dissemination of innovation and examples of how these generalizations can be applied. They are grouped into four categories: educational products, adopting systems, processes of development, and dissemination. For instance one generalization about adopting systems is "School districts and schools that place a high value on evaluation are more likely to adopt new products." In most cases examples of a generalization are cited for each level of policy making--building, district, state, and national. (Author/ND)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED115578

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL BY MICROFICHE ONLY HAS BEEN GRANTED BY
Karen B. Wiley
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED115578

THE DIFFUSION OF EDUCATIONAL INNOVATION: RECOMMENDATIONS FOR POLICY MAKERS AND ADMINISTRATORS

BY:

Richard O. Carlson, Professor of Education at the University of Oregon, Eugene, Oregon

Robert S. Fox (deceased) was Director of the ERIC Clearinghouse for Social Studies/Social Science Education, Boulder, Colorado and Professor of Education at the University of Michigan, Ann Arbor, Michigan

W. Williams Stevens, Jr., Wichita Public Schools, Wichita, Kansas (formerly Associate Director of the Social Science Education Consortium, Inc.)

SSEC Publication #181

Copyright 1975

Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302

The work reported herein was partially supported by grants from the National Science Foundation. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official U.S. Government position or policy.

Funds for the development of this book were provided by the Johnson Foundation and the National Science Foundation.

Sponsors of the Seminar on which this book is based were:

The National Council for the Social Studies
The Committee on Pre-collegiate Education of the American Political Science Association
The Social Studies Development Center at Indiana University
The Social Science Education Consortium, Inc.

TABLE OF CONTENTS

Preface i

Introduction 1

Background of the Recommendations 2

The Under-utilization of Knowlege 2

A National Seminar on Diffusion 3

Who Contributed 4

Uses and Limitations of the Generalizations 4

Generalizations & Examples of Their Application 7

Section I-A: 8

Section I-B: 9

Section II-A: 15

Section II-B: 16

Section III-A: 24

Section III-B: 25

Section IV-A: 28

Section IV-B: 29

PREFACE

This publication is one of three that grew out of the National Seminar on the Diffusion of New Instructional Materials and Practices held at the Wingspread Conference Center in Racine, Wisconsin, in June 1973. The seminar was supported by the Johnson Foundation and the National Science Foundation. It was planned and conducted jointly by the Social Science Education Consortium, Inc., the National Council for the Social Studies, the Committee on Pre-Collegiate Education of the American Political Science Association, and the Social Studies Development Center at Indiana University.

The seminar, a two-day meeting, was attended by over 50 social and natural scientists, college educators, classroom teachers, state and federal program officers engaged in supporting the development and diffusion of new curricula, public school administrators, curriculum materials developers, and publishers. The purpose of the seminar was to tap the knowledge of these resource persons regarding their *experience* in efforts to diffuse educational innovation. It was not an effort to bring together research findings from the literature on diffusion. Those concerned with these efforts at the Institute for Social Research at Ann Arbor, Michigan, and elsewhere have done an excellent job in reporting, categorizing, and analyzing empirical studies. (See, for instance, Havelock et al. 1971.) The seminar participants took part in a series of small- and large-group discussions. These were structured to bring out generalizations about diffusion based on the participants' experiences, to relate the generalizations where appropriate to research findings, and to translate the generalizations into practical suggestions for people working for change in schools. The authors and staff came well armed with posting paper and felt pens, tape recorders, ditto masters, and index cards so that all relevant ideas and examples could be retrieved. Following the seminar, the authors went to work on converting the discussions into a set of guidelines for policy makers. This paper is a product of that effort.

The purpose of this volume is to help policy makers organize their own knowledge and experience and clarify their thinking and planning for the diffusion of educational innovations. "Policy makers" include per-

sons who control the resources related to educational diffusion at the federal, state, district, and school building levels--officials of federal agencies involved in education (such as the National Science Foundation, the National Institute of Education, and the U.S. Office of Education), state education agency personnel, school superintendents, school board members, curriculum coordinators and specialists, principals, department chairmen, and the like. The volume describes 24 generalizations about educational diffusion that were generated in discussions by the seminar participants. These are generalizations that have grown out of the experiences of this wide variety of people, who have been involved in many different sectors of the educational enterprise. Each generalization is illustrated by examples of how it might be applied to real activities at four levels of administration.

In addition to this volume, two other documents derived from the seminar. The first is an article entitled "Perspectives on Diffusion: Descriptive and Prescriptive," which appeared in the November 1973 issue of the *SSEC Newsletter*. The article draws together the ideas of the major speakers at the seminar, Arthur W. Foshay (Teachers College, Columbia University), Edwin Mansfield (University of Pennsylvania), Everett Rogers (University of Michigan), and Michael Scriven (University of California at Berkeley). Each discussed the problem of under-utilization of knowledge and presented suggestions about how best to understand and deal with it.

The second seminar product is the *Wingspread Workbook for Educational Change Agents*, by James M. Becker (Indiana University) and Carole L. Hahn (Emory University). It presents the ideas and information generated at the seminar in a workbook format designed to give practical assistance to persons interested in bringing about specific changes in schools.

The production of a well-organized and readable publication out of the free-flowing (and often disorganized) discussions of a conference is a difficult task. In addition to the initial work of the three authors in organizing ideas and drafting a preliminary manuscript, a great deal of creative editorial work was done by Mary Jane Turner.

Irving Morrissett
July 1975

THE DIFFUSION OF EDUCATIONAL INNOVATION: RECOMMENDATIONS FOR POLICY MAKERS AND ADMINISTRATORS

Introduction

This paper is addressed to persons who control the resources that are used to diffuse and implement educational innovation. These people include decision makers at the federal, state, district, and school building levels--people such as principals, department chairmen, curriculum coordinators and specialists, school board members, superintendents, state education agency personnel, and officials in federal agencies supporting education (for instance, the U.S. Office of Education, the National Institute of Education, and the National Science Foundation). The paper is intended primarily to serve as a guide to help organize the experience and knowledge of those who make and carry out policy within the educational community. We believe that the paper will increase the likelihood that decisions about the development, implementation, and utilization of new educational practices will be rational and effective.

The paper consists of a set of 24 generalizations about dissemination of innovation and examples of how these generalizations can be applied by policy makers at the various administrative levels. These generalizations and application examples were generated by a group of educators on the basis of their long and broad experience in educational dissemination efforts. (The generation process and the participants are described below in this Introduction.)

The generalizations and their examples are grouped into four categories. Two categories contain generalizations about the characteristics of *things*--educational products, that is, materials and practices (discussed in Section I), and adopting systems (discussed in Section II). The other two categories deal with the *processes* of development (discussed in Section III) and of dissemination (discussed in Section IV).

Within each of the four sections, the generalizations related to the category under consideration are listed together first (in part A of the section), so that readers may quickly peruse them. Then, in part B of the section are described examples of action steps (applications) that policy makers at the various levels of administration might consider prior to making decisions about curriculum development, diffusion, and/or implementation. In most instances, examples are cited for each level of policy making--building, district, state, and national. In some, however, where action steps for two or more levels are similar, examples are not provided for each separately.

The examples are only intended to serve as guides. They do not pretend to be exhaustive in their development or listing. Readers, if they agree with the generalization, will be able to think of many more action examples. In fact, our intent is to encourage readers to consider carefully the unique set of circumstances that will influence the outcomes of their own efforts at diffusion and implementation. The generalizations are guideposts and warning signs. Specific actions that may result from an acceptance of the generalizations can be supplied easily by the reader, the actor, the person making and executing policy at any level of formal education.

Background of the Recommendations

The Under-Utilization of Knowledge. The production of knowledge in the form of ideas, new practices, or fresh materials and its availability for use is not by itself sufficient to assure that the knowledge will be used. Under-utilization of the best available knowledge is characteristic of many fields, including delivery of medical, legal, and dental services; industrial, business, and governmental operations; and educational activities. Many factors bear upon this, including:

1) the nature of the new knowledge;

2) the manner in which the knowledge was developed;

3) the credibility of the developer;

4) the relationship of the new knowledge to the social system in which it might be used;

5) the characteristics of potential users; and

6) the ways in which use has been encouraged.

Research studies of under-utilization have been conducted with a variety of types of "consumers" of new knowledge and practices. The results of these studies are useful in understanding under-utilization and in specifying means of modifying it.

Although empirical research is necessary and invaluable, of equal value in understanding the causes and consequences of under-utilization is the accumulated knowledge of those who are daily engaged in developing new practices and in encouraging their use. While the best of such experiential knowledge is presumably consonant with the best of the research literature, it represents a different kind of knowledge base, coupled with a different kind of verification. It was to tap the latter knowledge base that a seminar, the results of which are reported here, was convened. The focus of the seminar was on the knowledge accumulated by those individuals who were most involved in the development and dissemination of new ideas, materials, and curricula in the 1960s and early 1970s.

A National Seminar on Diffusion. The National Seminar on the Diffusion of New Instructional Materials and Practices was held at the Wingspread Conference Center in Racine, Wisconsin, in June 1973. The seminar, a two-day meeting, was attended by over 50 leading social and natural scientists, college educators, classroom teachers, state and federal program officers, public school administrators, curriculum materials developers, and publishers who have been centrally involved in the development and diffusion of new curriculum practices and processes in the past decade. With support from the National Science Foundation and the Johnson Foundation, the seminar was planned and sponsored jointly by the Social Science Education Consortium, Inc., the National Council for the Social Studies, the Committee on Pre-Collegiate Education of the American Political Science Association, and the Social Studies Development Center at Indiana University.

In order to retrieve extant experiential knowledge about the diffusion of new instructional materials and practices, the seminar was designed to elicit from the participants information about their experiences in developing and diffusing educational innovation. Participants prepared papers in advance of the seminar. In these, they addressed a set of questions about the problems of development and diffusion. The answers

to these questions were based upon knowledge gained from involvement in such activities. With these papers as a "starter," seminar participants took part in a series of small- and large-group discussions that were structured to surface generalizations that could be analyzed and translated into practical suggestions for policy makers working to effect change.

Who Contributed. An analysis of the backgrounds of the 50 seminar participants is given below. Following the analysis is a listing of participants, with their primary institutional affiliation.

Both practitioners and scholars were invited from across the United States. Fifteen came from the Northeast, 17 from the Midwest, nine from the Rocky Mountain area, and nine from the West Coast. Twenty-nine participants represented university or college faculties. Three were from the public schools, while eight worked directly for various educational associations such as the National Council for the Social Studies and the Social Science Education Consortium. One representative of a private foundation attended and six participants represented federal funding agencies.

In order to retrieve data important to policy making related to all disciplines, invitations were extended to practitioners from the natural sciences, social studies, mathematics, and history. Four of the participants were from the natural sciences, six from the social sciences, five from mathematics, and three from history. For many, the seminar provided the first opportunity to meet with colleagues from different disciplines for the sole purpose of considering problems associated with implementing education innovation.

The directors, participants, and staff are listed on page 6 at the end of this introduction. The institution listed for the participants indicate their primary affiliations at the time the seminar was held.

Uses and Limitations of the Generalizations

Of necessity, the generalizations presented here do not treat all factors related to making changes in schools. Even though this paper concentrates on the *development* and *diffusion* of new instructional practices and materials, and a companion paper (see Preface) addresses the area of *implementation*, some areas of significant concern are not dis-

cussed in either. For instance, the generalizations in this volume distinguish between high- and low-risk practices relative to diffusion, but they provide no help concerning how much risk policy makers and their colleagues ought to take.

Uppermost among the neglected concerns is *evaluation* of new materials and practices. While the generalizations help to distinguish between new practices that will spread widely and those that will not, they say nothing about the consequences--beneficial and detrimental--of increased use of innovations or non-use of innovations.

Thus, it must be remembered that, although emphasis throughout is on the diffusion of innovation, we do not intend to imply that all innovations should be diffused. Rather, we would hope that districts and schools would become *open to innovation*--very aware of new products and practices, but highly selective in what is chosen for the classroom.

DIRECTORS, PARTICIPANTS, AND STAFF OF THE SEMINAR

CO-DIRECTORS

Lee Anderson, Co-Director, American Political Science Association's Political Science Education Projects Professor of Political Science, Northwestern University

James M. Becker, Director, Diffusion Project, Social Studies Development Center, Indiana University

Merrill F. Hartshorn, Executive Secretary, National Council for the Social Studies

W. Williams Stevens, Jr., Associate Director, Social Science Education Consortium, Inc.

PARTICIPANTS

Douglas Alder, Associate Director, Instructional Development, Utah State University

Dorothy Arnof, Assistant Vice President and Executive Editor, School Division, The Macmillan Company

Kathryn Bloom, Director, Arts in Education Program, The JDR III Fund

Ernest Burkman, Project Director, Individualized Science Instructional System, Florida State University

Richard O. Carlson, Professor, Center for the Advanced Study of Educational Administration, University of Oregon

John A. Carpenter, Intercultural Education Specialist, Institute of International Studies, U.S. Office of Education

Thomas D. Clemens, Acting Director, Dissemination Task Force, National Institute of Education

Robert B. Davis, Director, Curriculum Laboratory, University of Illinois

James Eckenrod, Consultant, Biological Sciences Curriculum Study University of Colorado

Arthur W. Foshay, Professor of Education, Teachers College, Columbia University

Walter L. Gillespie, Head, Instructional Improvement Implementation Section, Division of Pre-College Education in Science, National Science Foundation

Emily Girault, Associate Professor, Graduate School of Education, University of Pennsylvania

John D. Haas, Director, Center for Education in the Social Sciences, University of Colorado

Carole Hahn, Coordinator, Social Studies, Indiana University

H. Mike Hartoonian, Social Studies Specialist, Wisconsin State Department of Public Instruction

Howard J. Hausman, Division Director, Division of Pre-College Education in Science, National Science Foundation

Suzanne Wiggins Helburn, Professor of Economics, University of Colorado

Leonard Hughes, Director, Bio-Medical Interdisciplinary Curriculum Project

Alan Humphreys, Associate Professor of Elementary Education, University of Minnesota

Paul DeHart Hurd, Professor Emeritus, School of Education, Stanford University

Jean B. Intermaggio, Program Manager, Materials and Instruction Development Section, Pre-College Education in Science, National Science Foundation

Charles C. Jung, Coordinator, Northwest Regional Educational Laboratory, Improving Teaching Competencies Program

Edith King, Professor of Education, University of Denver

Mark M. Krug, Professor, Graduate School of Education, University of Chicago

J. David Lockard, Director, International Clearinghouse on Science and Mathematics Curriculum Development, Science Teaching Center, University of Maryland

Earle Lomon, Director, Unified Science and Mathematics Projects, Education Development Center

Edwin Mansfield, Professor of Economics, University of Pennsylvania

Gerald W. Marker, Co-Director, Social Studies Field Agent Training Program, Indiana University

Howard Mehlinger, Director, Social Studies Development Center, Indiana University

John P. Neal, Directing Editor Secondary Social Sciences Department, Ginn and Company

Dennan Reilley, Director, The Community School, West Hartford Public Schools

Robert E. Rieck, Associate Dean, College of Agricultural and Life Sciences, University of Wisconsin

C. Frederick Risinger, Department Chairman, Social Studies, Lake Park High School

Everett Rogers, Professor of Communication, Michigan State University

Nina L. Ronshausen, Director, Math Tutorial Project, Indiana University

Michael Scriven, Professor of Philosophy, University of California

George Springer, Professor of Mathematics, Indiana University

Herbert Thier, Assistant Director, Science Curriculum Improvement Study, Lawrence Hall of Science, University of California

Alan Tom, Professor, Graduate Institute of Education, Washington University

Peter H. Woods, Assistant Director for Humanities, The Rockefeller Foundation

Stanley P. Wronski, Professor, Institute for International Studies, College of Education, Michigan State University

STAFF

James E. Davis, Assistant Director, Social Science Education Consortium

Robert S. Fox, Director, ERIC/Clearinghouse for Social Studies/Social Science Education

Irving Morrisset, Executive Director Social Science Education Consortium

Ellen Schultheis, Administrative Assistant, Social Science Education Consortium

Karen B. Wiley, Staff Associate, Social Science Education Consortium

Generalizations

&

Examples of Their Application

Section I-A

Generalizations about the Characteristics of Products (Materials and Practices) Most Likely To Be Utilized

The generalizations included in this first category refer primarily to characteristics that would seem to make a product's acceptance more likely. These generalizations have been grouped together and appear first because we believe a consideration of each of them must precede consideration of implementation and diffusion.

1) Products (materials and practices) designed for all elementary grade levels are more likely to be utilized than products designed for only one or a few elementary levels.

2) Products designed for established courses are more likely to be utilized.

3) Products with clearly stated rationales, general and specific objectives, and expected outcomes are more likely to be utilized.

4) Products that relate to areas undergoing an expansion of knowledge are more likely to be utilized.

5) Products that are compatible with existing societal and educational norms are more likely to be utilized.

6) Products that are so demonstrably and perceptibly meritorious that they involve low risk are more likely to be utilized.

7) Products that are supportive of teachers' views of themselves as professional persons are more likely to be utilized.

8) Products that have been prepared by developers who have generally-acknowledged integrity, credibility, and legitimacy are more likely to be utilized.

Applications of Generalizations

1) Products (materials and practices) designed for all elementary grade levels are more likely to be utilized than products designed for only one or a few elementary levels.

National Decision Makers

Those who fund and/or undertake curriculum development must be aware that a fifth-grade social studies project will have a much lower adoption rate than will a complete seven-year program, K-6. School districts tend to adopt entire elementary programs in order to avoid duplications and gaps. Single-year programs should be thought of as forerunners that might assist other developers in the creation of better materials, but such programs may not reach many classrooms directly.

State Decision Makers

Decision makers in states that develop curriculum guides or fund elementary programs must recognize the realities of school district adoption policies and financial constraints. Few districts have the fiscal flexibility to purchase the materials necessary to implement one-year programs. Minimally, curriculum guides should indicate the "fit" into multilevel programs.

District and Building-level Decision Makers

In developing or selecting a new program designed for only one grade level, practitioners should look beyond the immediate innovation and anticipate the new needs that the change is likely to stimulate in subsequent grade levels.

2) Products designed for established courses are more likely to be utilized.

National Decision Makers

Curriculum developers must realize that adoption is easier and thus more likely if products fit into slots with which practitioners are familiar. This is not advice to stay with traditional programs. It is rather a suggestion that (1) new ideas can be tailored to meet "old needs" and (2) concrete suggestions for integrating new pro-

ducts into old formats should be incorporated into product designs.

State Decision Makers

Products developed by state-level personnel should be designed with existing course structures in mind.

District Decision Makers

Materials that have been prepared by others outside the school district need not be disregarded even though they do not seem to fit the existing course structure. District decision makers can examine the expected outcomes of these materials or practices to see if they might not match or be adapted to the objectives of existing courses. They could develop a handbook of ways in which the materials or practices might be used within the existing framework.

Building-level Decision Makers

Curriculum specialists who wish to move new programs into their schools should look for pre-existing slots in the prescribed curriculum into which the new programs seem to fit logically rather than try to create a new course offering.

3) Products with clearly stated rationales, general and specific objectives, and expected outcomes are more likely to be utilized.

National Decision Makers

In broad terms, national funders and developers have been cognizant of the need for rationale statements and for delineation of general objectives and expected outcomes. Those who support national curriculum development must become much more concerned about project audit. Developers should be asked to submit the objectives of each unit to the funder and to independent groups to assess their clarity and utility.

State Decision Makers

State department personnel must analyze carefully the materials that they support for diffusion within the state. If rationales, objectives, and outcomes are not clearly stated, the defect will have to be remedied by preparing supplementary materials that can be distributed to the schools. Either assistance in how this information can be drawn from the products by school personnel or state department development of rationales and objectives would be appropriate tasks.

District and Building-level Decision Makers

School district and building-level personnel should pilot materials on a very selective basis if they do not contain clearly stated objectives and expected outcomes. Data need to be gathered on the outcomes and tied back to the materials to determine whether the district or school should use its resources to implement them.

4) Products that relate to areas undergoing an expansion of knowledge are more likely to be utilized.

National Decision Makers

Since practitioners are more likely to feel a need for assistance in areas of rapidly expanding knowledge, acceptance of innovations in these areas is likely to come more easily than in those fields in which teachers already have considerable background. Funding agencies and developers at all levels will probably find that they can get the most for their money by shifting expenditures into the new areas as they arise and "striking while the iron is hot." With good judgment, it is possible to respond to current needs without capitulating to faddism. Areas of new knowledge may not always be those most in need of innovation, though they may be most open to it for a limited period of time.

State Decision Makers

Beyond actually developing programs that address new areas of knowledge, personnel in state departments of education should search out those programs that meet other criteria for excellence. Wise curriculum decisions can be made at the district and school level only to the extent that practitioners are aware of choices among materials of this nature.

District and Building-level Decision Makers

If decision makers at the school district and building levels determine to develop new materials in areas of rapidly expanding knowledge, efforts should be made to include experts in the activity. Support for teachers to enhance their background--inservice courses, workshops, and seminars--might also be considered. Decision makers need to be aware of the possibility that new programs of this kind

may be of poor quality. It might be useful to introduce them into the classroom on a pilot basis and collect data to see how well they achieve expected outcomes.

5) Products that are compatible with existing societal and educational norms are more likely to be utilized.

National and State Decision Makers

Curriculum developers who consider their resources as high-risk money may support innovative materials that do not fit the conventional norms of schools and communities. When a choice is made to lead rather than follow, it should be clearly understood that adoption rates will probably be low initially. Although this may not be true over the long run and may not be the case for all innovative materials, this characteristic of adoption is serious for developers who must consider the political ramifications of using public money to support materials that will have little immediate use in the schools.

District Decision Makers

Controversial materials that might affront the sensibilities of significant numbers in a district or school should never be developed or introduced without first involving the community and school populations in a thoughtfully conceived re-education effort. Many times, those products that are not understood are suspect. To overcome resistance, workshops, demonstrations, and public seminars that examine intent, objectives, content, and strategies should be conducted to prepare the way for controversial programs. Generally, it is not possible to recoup after a negative community or school district response.

Building-level Decision Makers

High-risk materials should be tested only with the most confident teachers--those who are not afraid of failure. The administrators responsible for the high-risk materials must have strong backing in their schools and in the community at large. One experience involving the implementation of a set of questionable materials can be an obstacle to innovation for many years in the future if the materials fail or if teachers who are not sure of themselves feel threatened.

6) Products that are so demonstrably and perceptibly meritorious that they involve low risk are more likely to be utilized.

National and State Decision Makers

The applications noted for the preceding generalization are relevant in this case. Developers at all levels must be sensitive to the pressures of introducing anything novel into the classroom. Not only should great care be taken to produce only those materials that are educationally sound and of superior quality; adequate resources must be devoted to the explication of these characteristics. Statements that link materials or practices to educational research, results of field tests and evaluations, and/or other external evidence indicating quality should be included as an integral part of every product. These aids serve to make practitioners aware of the merit of the product and can be used to refute adverse criticism.

District and Building-level Decision Makers

If examination indicates that a particular product is useful and should be introduced into the schools, an effort should be made to point out what factors recommend the product. These data are often not explicit in the products themselves. Thus, school district and building personnel must take the responsibility for assembling the evidence and sharing it with those concerned.

7) Products that are supportive of teachers' views of themselves as professional persons are more likely to be utilized.

National and State Decision Makers

Developers must strike a nice balance in their assumptions about the users of new products. On the one hand, practitioners should be provided with every resource that will make implementation easier and less risky. On the other hand, it must be remembered that teachers are generally well educated and competent. They should not, therefore, be "written down to" or disregarded as impotent actors in their own arenas.

District and Building-level Decision Makers

At these levels, care should be taken never to develop or select products that do not support the teachers' professional concerns. A program that does not allow for modification to suit a teacher's

own style or does not permit the teacher to build the most effective learning situation is not likely to be perceived as worthwhile either educationally or personally.

8) Products that have been prepared by developers who have generally-acknowledged integrity, credibility, and legitimacy are more likely to be utilized.

National Decision Makers

To the greatest extent possible, developers and funders should appraise and determine the educational community's perceptions and attitudes toward developers to determine their levels of credibility and legitimacy. If materials are developed by those who are not respected by the potential user, adoption and use will be small. In the case of unknown developers, the lack of acknowledged credentials must be overcome, at least in part, by additional positive evidence about the products.

State Decision Makers

Personnel in state education agencies must clearly understand the value systems of educators within their state. If there is resentment toward particular scholars (such as a certain school of psychology), the expenditure of state resources for the implementation of materials developed by those scholars should be carefully considered.

District and Building-level Decision Makers

New curricular products should never be developed or existing ones modified without first identifying opinion leaders in various buildings and including them in the curriculum development/modification effort.

Section II-A

Generalizations about the Characteristics of Potential Adopters (School Districts and Schools)

The generalizations included in this second category focus, as do those in the preceding group, on characteristics. In this instance, the concern is with adopters and those elements in adopting systems that seem to determine whether new products will be used.

9) Suburban school districts and schools are more likely to adopt new products.

10) School districts and schools in which problem-solving skills have been developed are more likely to adopt new products.

11) School districts and schools that place a high value on evaluation are more likely to adopt new products.

12) School districts and schools in which there is an internal advocate for a new product are more likely to adopt that product.

13) School districts and schools that are characterized by open communication among teachers and between administrators and teachers are more likely to adopt new products.

14) School districts and schools that reward creativity are more likely to adopt new products.

15) School districts and schools that have established relations with outside sources of assistance are more likely to adopt new products.

16) School districts and schools that are unhampered by community opposition are more likely to adopt new products.

Section II-B

Applications of Generalizations

9) Suburban districts and schools are more likely to adopt new products.

National Decision Makers

Adoption is most likely to occur in areas of greatest wealth (suburban areas). Not only are the resources available to make possible extensive purchases of materials, but many curriculum developments have been designed primarily (consciously or subconsciously) with the suburban student in mind. In order to make products useful to students from other environments, funders and developers must address the common problems of inner-city and rural schools to determine how materials can be of use in these systems. Questions about the level of abstraction, reading level, and relevance of content must be raised and answered. Activities must deal with the realities of the urban and rural milieu and the conditions that exist within as well as outside the school setting.

State Decision Makers

State department personnel are in a good position to help solve the problem of limited adoption of innovative products by urban and rural districts. These decision makers must find ways to create cross-district curriculum implementation programs where the support and expertise of the suburban community can be channeled into training urban and rural teachers. Without this solution and given the tendency to design materials most useful for suburbia, those who have the least need of innovative curriculum materials will obtain the new materials and implement them. State department personnel can also assist urban and rural teachers in modifying programs so that they more nearly meet community needs and objectives.

District and Building-level Decision Makers

Local administrators must be willing to spend effort and time to increase communication between urban, rural, and suburban districts. It is not enough for superintendents to have luncheons. Curriculum personnel must meet frequently to consider problems of implementation of innovation. Suburban administrators and teachers could

assist their inner-city and rural colleagues in implementation efforts by providing training and other services. Unless federal or state funding for such cooperative efforts can be found, a significant portion of the cost for improving the urban and rural systems will have to be borne by the suburban districts.

10) School districts and schools in which problem-solving skills have been developed are more likely to adopt new products.

National and State Decision Makers

The developers and funders of curriculum materials should include in their products problem-solving activities that can be used for staff development. This does not mean that each set of materials must contain a complete guide for utilizing any innovation. It does mean that an integral part of each program should be a teacher training kit that deals specifically with the materials and strategies integrated in the program.

District and Building-level Decision Makers

The responsibility for helping teachers to develop problem-solving skills rests primarily with the school district and individual schools. Inservice training workshops and demonstrations are useful ways to enhance teachers' skills. After training has been completed, the entire staff should be encouraged to participate in identifying problems and finding solutions.

11) School districts and schools that place a high value on evaluation are more likely to adopt new products.

National Decision Makers

School district personnel who understand and appreciate educational evaluation will tend to place greater value on new products that have been well evaluated, will be more likely to make appropriate use of product evaluation data, and, thus, will tend to do a better job of implementing. Also, districts with personnel who are oriented to evaluation will be less inclined to continue existing programs that do not show up well in evaluations and will be more confident about looking over the field of new products and making wise selections in replacing unsatisfactory programs. Thus,

national developers and funders should continue designing programs which are carefully evaluated during development and capable of evaluation during use. Furthermore, funding organizations should consider supporting more research and development programs and in-service training in the area of evaluation. The evaluation models that could emerge from these efforts would greatly enhance the capability of schools to appraise their own internal efforts.

State Decision Makers

It is not enough for states to create accountability programs. State department officials must not only encourage schools to recognize the importance of program evaluation but assist them in developing evaluation techniques. If state departments do, in fact, help schools to understand the importance of evaluation, we should see an upturn in the number of schools willing to discard old programs showing poor results and to make decisions about new programs based on pilot-testing results.

District and Building-level Decision Makers

District and building-level administrators should develop inservice programs to assist teachers in evaluating their own teaching efforts. In most cases help can be obtained from local universities and colleges. Care should be taken, however, to see that evaluation projects do not turn into research efforts that are much more complex than necessary and have different goals. The focus should be on helping teachers to obtain better feedback on their own classroom strategies and materials, so that they can make improvements accordingly.

12) School districts and schools in which there is an internal advocate for a new product are more likely to adopt that product.

National and State Decision Makers

Developers and funders of new products should establish a network of contacts who are kept aware of the progress of the developmental effort. Funders might even go so far as to insist that administrators and teachers be somehow involved in the developmental program--through questionnaires or field tests, for example. Every effort should be made to distribute information about the new products at

at national, regional, and state professional meetings.

District Decision Makers

School districts should provide opportunities for teachers to visit institutions where new materials and ideas are being developed so that they can become informed about program quality and design. This information can then be shared with colleagues. Administrators should also determine which teachers are opinion leaders within their district and try to get their help. Having opinion leaders introduce new products and procedures helps insure acceptance by others.

Building-level Decision Makers

School building administrators should monitor journals and announcements about materials and workshops. If an innovation is considered worthwhile, one or a few teachers should be encouraged to study it. Teachers should be provided with as many opportunities as possible to attend workshops on innovative products and practices. When they see something they like, they may become inside advocates for the installation of that product or practice.

13) School districts and schools that are characterized by open communication among teachers and between administrators and teachers are more likely to adopt new products.

National Decision Makers

Funders and developers of national programs should consider preparing materials that are specifically designed to develop the communication skills of administrators and teachers. Staff development kits that include this kind of assistance should be included as integral parts of all new programs. Opportunities for interaction between school faculties and developers of programs in the form of questionnaires, feedback forms, and so on might also be useful to encourage open communication about the pros and cons of new products and practices.

State Decision Makers

State resources can be effectively channeled into human relations workshops that focus on the democratic school. A variety of techniques- university credit, inservice credit, released time,

mobile units, publicity, and announcements--can increase participation. Districts that build effective systems of communication should be noted and rewarded.

District Decision Makers

School districts should conduct inservice programs that are structured to enhance the self-image of teachers. As self-image improves, teachers should become more self-confident in risking tryouts of innovations and entering into dialogue with administrators and colleagues about the advantages and disadvantages of proposed innovations. Administrators should spend more time in the schools and in classrooms visiting with teachers, discussing needs, and determining how teachers feel they can be helped.

Building-level Decision Makers

Administrators should arrange opportunities for teachers to work together on topics of interest in order to build confidence and to clear communications channels. Outside consultants might be contacted to structure problem-solving sessions. Formal communications committees that conduct short information-sharing sessions have worked well in some districts. Such sessions do not have to be elaborate in order to effectively increase communications and open discussions.

14) School districts and schools that reward creativity are more likely to adopt new products.

National Decision Makers

Research and development centers should use more of their resources to study creativity and the ways in which it may be developed in adults and children. Models for developing creativity as well as instruments for measuring and testing it should be designed and made available to school district personnel.

State Decision Makers

State officials need to examine schools that are creative within their states to determine what causes them to be creative. They should encourage administrators to send personnel to look at creative schools. These visitors should be provided with analytical guides so that they can make useful observations that will assist

them in changing their own school districts.

District Decision Makers

At the school district level, administrators have to exercise discretion when holding up innovative and creative buildings as examples for the rest of the schools in the district. If the exchange of information about some schools doing "good" things within a district is not subtle, other schools may become defensive and unwilling to cooperate in new endeavors.

Building-level Decision Makers

Principals can encourage their creative teachers by supporting and rewarding their efforts.

15) School districts and schools that have established relations with outside sources of assistance are more likely to adopt new products.

National Decision Makers

Federal support should be provided to assist state department, district, and building-level personnel in strategic positions to develop their consulting skills. Support should also be given to help make other kinds of technical assistance available to districts.

State Decision Makers

State departments should establish methods of facilitating the access of school districts to outside human resources, pinpointing the resources who could meet specific needs. It would also be helpful to provide models to assist districts in training their own corps of experts. Although human resources need to be developed within state agencies to meet particular kinds of school needs, the development of general consulting skills is as important as specialized knowledge. To the degree that school districts cannot support the development of their own resource personnel, state departments must stand ready to provide assistance.

District Decision Makers

Districts should cultivate communication with organizations that might be useful as sources of or linkages with human and materials resources. In addition to the state agency, this might include Boards of Cooperative Services (BOCS) and other intermediate units, appropriate schools or departments of nearby colleges and universi-

ties, and private agencies.

Building-level Decision Makers

Schools should actively seek knowledge about outside human resources. These people should be sought in other schools, in the district office, in the community, in nearby colleges and universities, among parents, in BOCS, in other types of intermediate units, and in private organizations. Staff should be encouraged to attend seminars, workshops, and demonstrations and rewarded for sharing new information and skills.

16) School districts and schools that are unhampered by community opposition are more likely to adopt new products.

National Decision Makers

Those who use federal funds for curriculum development must be responsible to the Congress for the types of materials they support. Developers and funders need to understand clearly the mood of the nation and of the Congress. This is a difficult task because it takes a number of years to produce a set of curriculum materials and by the time the finished product comes off the line, the mood of the nation may have shifted. There are, however, certain areas of the curriculum that probably will always be sensitive and those areas should be identified so that they may be either handled wisely or deleted, if this can be accomplished without destroying the integrity of the program.

State Decision Makers

State department personnel must move out into the community and among their clientele in order to provide support and legitimacy for innovative efforts. They should attend parent-teacher meetings and other community gatherings to answer questions, demonstrate concern and develop empathy.

District and Building-level Decision Makers

Administrators in school districts and schools should never undertake new programs without apprising the community of what is planned. In most cases there will be little interest, but if questions do arise, they can be aired and dealt with before too great an effort is invested in an unacceptable, unworkable direction and before

the parties to the debate become too polarized to reach any solution at all.

Section III-A

Generalizations about the Ways in Which New Products Should Be Developed

Generalizations in this category link directly to those in Section I because they are concerned with the developmental process that seems most likely to produce ideas, materials, and practices that will be accepted. The emphasis of this section is on *how* the best product is developed.

17) The process of development should be a collaborative activity in which potential users are consulted continuously.

18) Developmental plans should include a systematic evaluation program.

19) An integral part of the developmental plan should be a formal dissemination plan.

Section III-B

Applications of Generalizations

17) The process of development should be a collaborative activity in which potential users are consulted continuously.

National and State Decision Makers

At these levels of decision making, an obvious prelude to including potential users in the developmental activity is the identification of these people. Minimally, all *types* who will be using the product or practice should be involved. It also makes sense to pay some attention to geographical distribution. Teachers of high school government classes in Detroit may have needs and expectations that are entirely different from those of teachers of this course in Franklin, Nebraska. Requests for proposals should define plans for continuous collaboration, describe plans for systematic collection of feedback and revision based upon that feedback, and include budget allocations to cover collaboration and feedback activities. In order to accomplish the kind of collaboration that would achieve optimum benefits, funding for periods of longer than one year is probably essential.

District and Building-level Decision Makers

Every district and building-level curriculum writing team should have as many users as feasible included in the curriculum development task. Those users who do not participate extensively should at least be involved in initial brainstorming, critiquing of drafts, and field testing of the completed materials.

18) Developmental plans should include a systematic evaluation program.

National and State Decision Makers

The quality of products should not be judged on the basis of their novelty. Materials and practices are useful only if they work in the classroom. It is imperative, therefore, that every developmental activity provide extensive opportunities for systematic formative and summative evaluation. Materials should be revised on the b[illegible] of formative evaluations, and the evaluation data

should be made available to users. Funders should specify that every program contain this component. Legislative committees might attempt to produce a set of evaluation guidelines and research and development centers should develop a general-purpose methodology which could be used.

District and Building-level Decision Makers

Local development efforts should attend to evaluation planning at the same time learning objectives are developed for the proposed materials or practices. District research and evaluation offices, where they exist, should work with local development teams in designing formative and summative evaluation plans from the very beginning of the developmental project. Where districts do not have a staff specializing in evaluation, development teams might draw on expertise from a nearby university or college, from the state education agency or an intermediate unit, or they might search out and encourage participation by "home-grown" talent.

19) An integral part of the developmental plan should be a formal dissemination plan.

National and State Decision Makers

The decision to prepare materials is always undergirded by an assumption that the new program will be in some measure better than what has preceded it and, hence, attractive. But "inherently" attractive products do not necessarily disseminate themselves. Innovative products almost by definition contain new and unique ("strange," "controversial," "radical," "unmanageable") features. The developers will have to figure out how these can best be introduced and explained to potential users. If the program relies on strategies that teachers find difficult to employ, an inservice training plan or development of a teacher training kit may be called for. Potentially controversial content may have to be "toned down" or ways suggested for users to deal with it. Every funder should require a dissemination plan as part of the proposal for a development effort.

District and Building-level Decision Makers

Much the same concerns that apply to the national and state levels apply here also. Provisions for inservice training in using the materials and strategies--with incentives such as university credit, inservice credit, released time, and stipends--should be included in the development plan. Programs that depend upon content which is perceived as risky should include guidelines for building community support.

Section IV-A

Generalizations about the Ways in Which Dissemination Plans Should Be Developed

The generalizations in this category are directly related to those in the preceding section. They are, in fact, an elaboration of Generalization #19, which suggests that a dissemination plan should be an integral part of the development plan. Simultaneous consideration of both development and dissemination at the beginning of a project can enhance both the product and its chances for widespread implementation. Early contact with the potential user audience gives increased "lead time" for bringing the new product to the attention of these people and exploring ways of helping them with the implementation of the product. Early contact also gives developers more opportunities for discovering the needs of potential users and tailoring their product in light of this.

20) The dissemination plan should be comprehensive and include the inputs of developers, evaluators, and users.

21) The dissemination plan should employ multiple communication channels, each geared to specialized roles such as college professors, teachers, administrators, and supervisors.

22) The dissemination plan should take into account and utilize the existing organizational structure in the schools.

23) The dissemination plan should allow for an exchange of information between developers and potential users, among teachers within a school, and among schools.

24) The dissemination plan should deploy creditable persons to assist potential users.

Section IV-B

Applications of Generalizations

20) The dissemination plan should be comprehensive and include the inputs of developers, evaluators, and users.

National Decision Makers

As noted previously, development should never proceed independently of a thoughtful plan for dissemination. The plan should include the division of labor, schedule of activities, list of strategies to be employed, identification of audiences, a budget, and specific standards for evaluation of the effectiveness of the plan. Funders should require that such a plan be submitted in all developmental proposals.

State Decision Makers

All that has been said about national decision makers applies to those at the state level. State decision makers especially need to be aware of existing statewide networks such as professional organizations and state office mechanisms and include these systems in the dissemination effort.

District Decision Makers

All who will be involved in dissemination should be included at the onset of development in helping to devise dissemination strategies. Care must be taken to deploy personnel into roles where their particular expertise may be used most effectively.

Building-level Decision Makers

Local developers are in the most strategic situation with respect to dissemination because they can actually bring together the talents of the majority of those who will use, and ultimately determine the success or failure of, a program. Decision makers must help these people obtain the skills necessary to work together, communicate, share, and assume responsibility for the total effort.

21) The dissemination plan should employ multiple communication channels, each geared to specialized roles such as college professors, teachers, administrators, and supervisors.

National Decision Makers

The dissemination plan should identify the roles, responsibilities, channels, and relationships of those who will carry out the plan. It should establish criteria for judging the appropriateness of channels for each role. Short- and long-term strategies need to be devised to allow for immediate impact as well as an enduring gain.

State Decision Makers

Channels should be identified for each role and strategy. Whenever possible, multiple channels should be used for sending the same or similar messages. For instance, announcement of availability of a new program might be made in a state department of education newsletter, in workshops conducted by state department personnel, and in visits to schools made by state department subject-area consultants. The receipt of similar messages from several sources will have a reinforcing effect upon potential adopters.

District and Building-level Decision Makers

Interest and support can be generated by encouraging the media, professional associations, parent groups, authorities at the university level, and other influentials to discuss new programs. Well-informed internal advocates are especially important in generating awareness and acceptance.

22) The dissemination plan should take into account and utilize the existing organizational structure of the schools.

National and State Decision Makers

Among the organizational attributes of typical schools and school systems are roles such as department chairmen and curriculum coordinators, inservice and college credit requirements, and textbook adoption procedures. How each of these attributes might best be used in dissemination should be considered in the plan. A decision to ignore or bypass existing organizational structures should not be taken lightly; alternatives must be examined carefully and compared with the advantages and disadvantages of "sticking to" existing channels.

District and Building-level Decision Makers

At the district and building levels of decision making, both the formal and informal power structures should be considered. Opinion leaders and internal advocates should be used to build support if it is considered necessary to bypass the formal hierarchy. If the hierarchy is perceived as supportive then these change agents will make dissemination even easier. It is advisable to include in information sharing sessions any administrators who might have to deal with parents and teachers who perceive the innovation as threatening.

23) The dissemination plan should allow for an exchange of information between developers and potential users, among teachers within a school, and among schools.

National and State Decision Makers

Developers need to start disseminating information about development immediately and continue sharing data about progress, problems, and revisions. Continuing needs assessments and careful attention to user input will provide useful data for program design and assure that many potential users will feel they have a personal investment in the finished product. Demonstration centers, regional workshops, and conferences of field test teachers can provide opportunities for learning about and relating to the materials.

District and Building-level Decision Makers

Administrators and teachers at these levels need to feel that their needs are used as the basis for devising new or changing old patterns of dissemination. Two-way communication systems should be encouraged. Messages requiring responses and staff sharing sessions are among the techniques that can be employed.

24) The dissemination plan should deploy creditable persons to assist potential users.

National Decision Makers

Developers should consider using developmental money for establishing regional teacher training and demonstration centers. Opportunities should be provided for training university and college pro-

fessors, state department and district consultants, and others close to potential users in the use of the new materials or practices. Personal rather than impersonal dispensers of information are more likely to produce a favorable impact.

State Decision Makers

State service personnel need to be well trained in the use of innovative materials. These people should be adept at providing assistance in modifying and adjusting materials to meet the particular needs of different communities and schools.

District and Building-level Decision Makers

Administrators need to identify the people in their systems who have the interest and aptitude for dissemination. While some work well in informal information exchanges, others should be given opportunities to attend teacher training workshops so they can become formal disseminators. They will also need administrative assistance in structuring inservice meetings for their colleagues.